

disagree. Borchardt teaches the use of a continuous separation channel centrifuge, as depicted in Figure 1 of U.S. Pat. No. 5,846,439. The centrifuge used in the methods according to the present invention is completely different, as shown in Figure 1 of the present application. In the method taught by Borchardt, collected parasites are retained in the channel labelled "12" in Figure 1. In applicants' invention, parasites are collected in replaceable sample tubes. It is not clear how a filtration column of particulate material, as employed in the present application, could be added to a channel as taught by Borchardt. Furthermore, in the method disclosed by Borchardt, the collected material must be removed from the separation channel before a subsequent sample can be processed. In applicants' claimed method, the sample collection tubes need merely be replaced.

Applicants also respectfully submit that the centrifuge apparatus used by Borchardt is far more complex than that of the present invention, and will not be operable for the purposes of the present invention. Any apparatus used for these purposes must perform with natural water with various quantities of sediment. It is respectfully submitted that a delicate piece of apparatus designed for medical work, as used by Borchardt, that was designed to centrifuge a few litres of blood, cannot handle quantities up to 20-30 litres of water.

Finally, it is respectfully submitted that the Borchardt patent "teaches away" from the present invention. For example, at column 2, lines 28-29, it is stated that "the sand column system was judged inadequate for monitoring because of the poor retention of oocysts...".

The Leu patent does not remedy the deficiency of the Borchardt patent to suggest the present invention. First, there is no suggestion in either Borchardt or Leu which would motivate a person skilled in the art to combine the two documents. The Borchardt patent is directed to use of a continuous separation channel centrifuge, whereas the Leu patent is directed to a centrifuge tube to be used for separation after density gradient centrifugation. These two processes are inherently different. Furthermore, there does not appear to be any

way that the centrifuge tube of Leu can be combined with Borchardt to yield the present invention. Furthermore, the centrifuge tube of Leu is designed for removal of gradients following density gradient separation, and not for operation during the centrifugation process itself. It is respectfully submitted that even were the teachings of these two patents able to be combined, it would not result in the present invention. Finally, as noted above, Borchardt teaches away from the use of a sand column system, and makes no mention of glass beads. Thus, the suggestion to use the required element of a filtration column of particulate material is missing from the teachings of these documents. For all of these reasons, it is respectfully submitted that the presently claimed invention is not obvious in view of Borchardt and Leu. Withdrawal of the 35 USC § 103 rejection is respectfully requested.

With respect to remaining claims 4, 6-8 and 10-12, it is respectfully submitted that these are not obvious in view of the combination of Borchardt and Leu for the same reasons as base claim 1. Withdrawal of the 35 USC § 103 rejection is respectfully requested.

The Examiner objected to claim 3 as being a duplicate of claim 1. In order to expedite prosecution, claim 3 has been cancelled. Claim 4 has been rewritten to depend from claim 1.

All objections and rejections having been addressed, it is submitted that the application is in condition for allowance, and Notice to that effect is respectfully requested.

Respectfully submitted,

PILLSBURY MADISON & SUTRO LLP

By 

Ann S. Hobbs, Ph.D.

Reg. No. 36,830

Tel. No.: (202) 861-3063

Fax No.: (202) 861-0944

1100 New York Avenue, N.W.
Ninth Floor
Washington, D.C. 20005-3918
(202) 861-3000